

**INFLUENTIAL FACTORS WHY LATINO STUDENTS ATTAIN A BACHELOR'S
DEGREE**

A Dissertation Presented to
the Faculty of the Department of Psychological Health and Learning Services
University of Houston

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

By
Isabel Hejazi-Rodriguez

December 2016

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ACKNOWLEDGEMENTS

My special thanks go to Dr. Catherine Horn for her support and guidance throughout this endeavor. My sincerest appreciation goes to Drs. Augustina Reyes, Jacqueline Hawkins, and Kristi Santi for being part of my dissertation committee. I would also like to thank my mentor Mrs. Sandra Arredondo who has supported me through my educational career and inspired me to study Latinos in education. A much obliged thank you to my mother, Esthela Rodriguez, who without her this goal would have never been accomplished. My husband, Dr. Pooya Hejazi, for his perpetual support. Last, but certainly not least, to my inspiration and drive, my sons, Aryan and Aarad Hejazi.

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ABSTRACT

Using data from a survey conducted by the Pew Hispanic Center (n=2,012) to answer them, the study asks the following research questions: Does Latinos' value of education increase likelihood of completing or planning to complete a bachelor's degree among Latino students? Does Latinos' perception of academic readiness increase the likelihood of completing or planning to complete a bachelor's degree? In addition, do in-college rigorous, academic behaviors influence completing or planning for college completion of the Latino population? The research applied the Nora Student Engagement Model (Nora, 2002, 2003, & 2006) as a theoretical framework to analyze the factors postulated including valuing of education, academic readiness, and in-college rigorous behaviors. The outcome of interest was intent to complete or completion of a bachelor's degree.

The logistic regression ($\chi^2 = 103.97$, $p < .001$ with $df=3$) indicated that the constructs of valuing of education and academic readiness were significant predictors of bachelor degree completion ($p < .001$). The more value of education a student has the more likely he/she is to complete a bachelor's degree. Similarly, the better academically prepared a student perceives to be, the more likelihood of a bachelor's degree completion. This analysis indicated that the construct of in-college rigorous behaviors was not a significant predictor.

This study provides educators insight as to why there is an underrepresentation of Latinos at universities. The conclusion of this research informs educators that in order to increase representation of Latinos at universities, valuing of education must be integrated into the K-12 curricula. Since this study indicated that Latinos who value education are more likely to complete a bachelor's degree, K through 12 institutions should promote the benefits of a college education in order to increase college enrollment post high school.

According to this study, students who are knowledgeable of the college matriculation path are more likely to complete a bachelor's degree. Therefore, K through 12 institutions should

also incorporate a college seminar class where students understand the college matriculation pathway. College preparatory charter schools have provided these classes and have demonstrated high college matriculation numbers among minorities (Perna, 2000).

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CHAPTER 1: INTRODUCTION

Statement of the Problem

In 2015, the U.S. Census Bureau reported that there are 56.6 million Latinos living in the United States, approximately 17.4 percent of the U.S. population. The U.S. Census Bureau projects the Latino population to be 30 percent of the population. Therefore, Latinos are the largest minority and are projected to continue to be the largest minority in the United States (Pew Hispanic Center, 2010). The median age for Latinos in the United States is 29 years of age. Consequently, Latinos who are college-age are well represented in the U.S. population.

Even though Latinos are the largest ethnic minority group in the United States, they are underrepresented in higher education institutions (Pew Hispanic Center, 2010). Underrepresentation in higher education has led to a lower number of Latinos in professional fields like medicine, law, business, politics, and engineering. This underrepresentation creates a problem in society because the needs of the Latino community are not always met.

Income distribution and wealth among the Latino and non-Latinos are disproportionate because of the underrepresentation of Latinos in white-collared jobs. Earning a college degree facilitates closing these income disparities among the population and it enables achieving a higher socioeconomic status (Johnson, 2006). However, according to the Pew Hispanic Center (2010), Latinos are not attaining college degrees at the same rate as other ethnicities. Hence, it is crucial to understand why Latinos are lagging behind other ethnicities in higher education institutions.

Purpose of the Study

In order to have a better understanding of Latino students' underrepresentation in both higher education and, thus, professional fields, an analysis was made from an earlier factor analysis of the archival data provided by the Pew Hispanic Center to understand what factors influence bachelor degree attainment in the Latino population. These factors are valuing of education, Latino students' perceived academic readiness, and the influence of the students'

rigorous academic behaviors. Specifically, this study sought to answer the following research questions:

1. Does Latinos' value of education increase likelihood of completing or planning to complete a bachelor's degree among Latino students?
2. Does Latinos' perception of college readiness increase likelihood of completing or planning to complete a bachelor's degree?
3. Do in-college rigorous, academic behaviors influence completing or planning for college completion of the Latino population?

Study Rationale

Previous research has demonstrated that there are significant differences between Latinos and other ethnic groups in college educational attainment (Arana, Castaneda-Sound, Blanchard, Aguilar, 2011; Garcia & Bayer, 2005). According to Castillo, Conoley, Choi-Pearson, Archuleta, Phoummarath, and VanLandingham (2010), only 13 percent of Latinos in the United States as compared to 30.6 percent of Whites obtain a bachelor's degree. Castillo et al. compared students who were enrolled in college, and only 23 percent of the Latino students who had been enrolled in college completed their degree as opposed to 47 percent of White students (U.S. Census Bureau, 2015). This demonstrates the disparity between the educated Latino populations compared to non-Latinos. This disparity has a negative impact on our economy if the largest minority is undereducated.

Based on research from the U.S. Census Bureau (2015), a bachelor's degree increases a person's income by approximately \$23,000 a year. By increasing Latinos' college attainment, Latinos' quality of life increases significantly (Prospero, Russell, & Vohra-Gupta, 2012). A bachelor's degree allows individuals to improve their quality of life. Improvement of quality of life changes significantly among first-generation students with a college degree. First-generation students refer to those students who are the first member of their family to attend a higher

education institution (Choy, 2001). First-generation students tend to be Latino, women, older, low-income and/or working full time (Choy). To first-generation Latino students, a college degree signifies the possibility of a professional career, a well-paying job, and a better life (Rios-Aguilar & Marquez-Kiyama, 2012).

There have been many researchers attempting to define specific factors that contribute to the underrepresentation of Latinos at universities (Choy, 2001; Gandara & Contreras, 2009; Lopez-Turley, 2009; Nora, 2006; Prospero, Russell & Vohra-Gupta, 2012). More specifically, the Nora Student Engagement Model (2006) determined six major factors: pre-college factors, sense of purpose and institutional allegiance, academic and social experiences, cognitive and non-cognitive outcomes, goal determination, and persistence. Even though this model has six components, I have narrowed the factors to only three: valuing education, college readiness, and in-college rigorous behaviors¹. A measurement of how these three factors predicted if Latinos are more likely to plan to attain a bachelor's degree was conducted. Since the focus is only these three factors, this study can provide a more precise understanding of why Latinos are underrepresented at universities.

The Nora Student Engagement Model (2006) also examines these components as influential factors for Latinos to attain a college education. An attempt to measure how the three factors can predict planning to complete a bachelor's degree occurred. The attempt to measure occurred by analyzing the participants' response if they do or do not plan to complete a bachelor's degree, if they are currently enrolled at a university, or if they have already completed a bachelor's degree. Therefore, this study is more specific than Nora's attainment of a college education as it focuses on bachelor degree attainment. This study fills in the gap in the literature by examining these factors together and having a precise outcome variable.

¹ I will discuss in more detailed why I will focus on these three specific factors in the methods section.

Definitions

The contingent factors identified during this study are valuing education, college readiness, and in-college rigorous behaviors. I attempted to measure value by asking participants about their goals and aspirations towards a college degree. Students who have goals and aspirations toward education demonstrate higher valuing of a college degree (Nora, 2002, 2003; Nora, Barlow & Crisp, 2006).

Furthermore, college readiness is also an important influential factor for a Latinos' decision to pursue a college degree (Nora, 2002, 2003). College readiness refers to the academic levels a student obtains during their school years. The survey that I used asked participants about their overall experience during their school years. Students who perceive to be less academically competent than others will be less likely to pursue a college career.

Students who value education and are academically confident to enroll in a university still need to have in-college rigorous behaviors. These behaviors include students' persistence and commitment to continue their studies even when faced with adversities. Latinos have reported lack of familial support towards education; therefore, since they do not have such strong support, Latinos must have strong in-college rigorous behaviors to succeed (Saunders & Serena, 2004).

These factors, valuing of education, college readiness, and in-college rigorous behaviors are important predictor variables to bachelor's degree completion of Latinos. Therefore, this study attempts to measure these factors in order to predict attainment of a bachelor's degree amongst the Latino population. The Pew Hispanic Center (2009) survey asked Latinos if they were currently enrolled in a higher education institution. If the participant was currently enrolled, the interviewer continued to ask if they were planning to complete a bachelor's degree. I utilized the participants' responses if they plan or they do not plan to continue their education to complete a bachelor's degree. The interviewer also asked participants if they had completed a bachelor's degree already. I combined these responses, currently enrolled in higher education institutions,

completed a bachelor's degree or if they plan to continue their education to complete a bachelor's degree, with the participants who had already completed a bachelor's degree.

Overview of the Dissertation

This dissertation began with an overview of the issues in Chapter 1. A proposal of the importance of factors that may increase representation of Latinos as college graduates and productive members of the workforce. The statement of the problem, purpose of the study, research questions, and definitions of terms were also offered. In Chapter 2, a review of the literature is presented in several areas and include an in-depth discussion of the theoretical framework. In Chapter 3, the proposed methodology, research design, data collection, data analysis, limitations, and a summary are discussed.

CHAPTER 2: LITERATURE REVIEW

The extant research on Latinos' higher education careers is vast. However, the literature presented is focused on the factors analyzed for this study. First, an elaborate description on the theoretical framework is presented. Then, a description on the literature pertaining to the factors measured is presented: valuing education, college readiness, and in-college rigorous behaviors. In order to comprehend why Latinos are underrepresented in college campuses across the United States, it is crucial to examine where Latinos are now in education and present data of how Latinos stand in college degree attainment in comparison to non-Latinos.

Theoretical Framework

For this study, the Nora Student Engagement Model (2006) is used as a theoretical framework to undergird the study. Nora states that precollege factors, sense of purpose and institutional allegiance, academic and social experiences, cognitive and noncognitive outcomes, goal determination, and persistence are vital factors for Latinos to complete a college degree. Nora focuses not only on undergraduate degrees, but he also addresses the underrepresentation of Latinos in master's and doctoral programs.

Nora's studies have indicated that there are precollege academic deficits in reading, mathematics, and science proficiency among Latinos and non-Latinos (Nora, 2002). Nora explains why these discrepancies are prevalent among Latinos. He concludes that there are systematic barriers that affect Latino academic achievement due to educational imbalances between affluent and less affluent school districts. Affluent school districts have more resources than less affluent school districts. Because of these barriers, Latinos are more likely to be retained in elementary, middle, or high school, which can lead to dropping out. Nora also states that schools focus on standardized tests more than on the needs of students. Therefore, Latinos are diverted into the general education population and they are not focusing on the academic gaps of Latino students. The elementary, middle, and high schools where there are a larger number of Latinos matriculated seem to operate with inappropriate curricula, lack computer technology, and employ uncertified teachers which can negatively impact the academic readiness of the students (Nora, 2002).

One of the precollege factors that Nora addresses is support and encouragement from family. A family who values education is more likely to encourage and support their child to pursue a college career. Nora explains how valuing education is prevalent for Latino students to demonstrate strong intentions to enroll and complete a college degree (Nora, 2002). Even though Latino students possess the desire to earn an undergraduate degree and further pursue a graduate degree when enrolling in college, they lack the support and encouragement from their family. These aspirations have been formed as early as their elementary years. However, in the Latino community, it is crucial that the family supports these aspirations in order for them to be reached. Therefore, parents and family members must value education in order to demonstrate encouragement and support for Latino students to pursue and complete a bachelor's degree.

Nora not only focuses on emotional support, but also financial support from family members (Nora, 2002). In order for any student even to consider enrolling in college, he/she must

decide if the family can afford it. Nora elaborates how college has become less accessible to Latinos in the past decades. Even though there are Pell Grants available for students, there are more expenditures that must be covered besides tuition. Therefore, even when Latinos matriculate at a university, they still face a high risk of dropping out because of financial reasons. Families who occupy the bottom tier of the economic ladder are less able to support a college education. Low-income families do not have a reserve to support a family member pursuing a four-year degree. Many Latinos decide to start a low-income job right after high school to supplement their household income instead of attending college for four years.

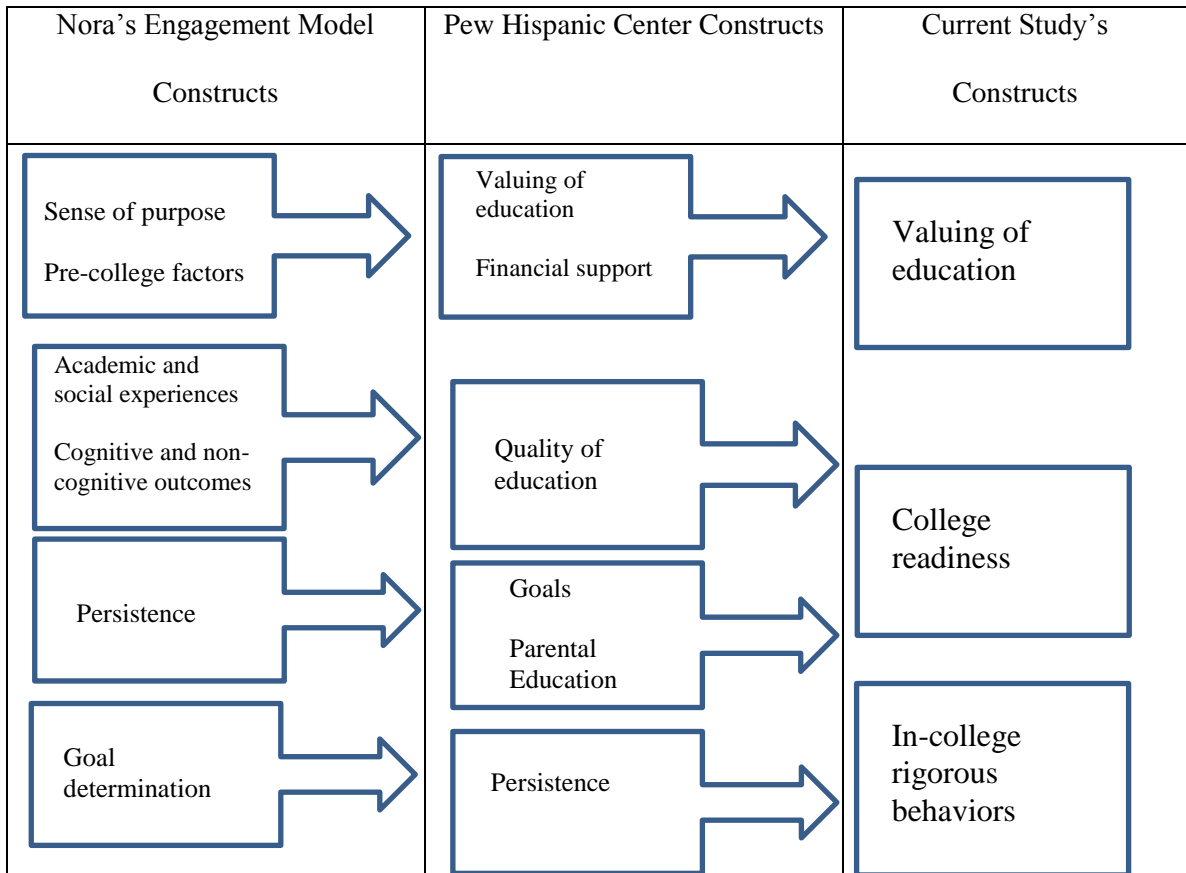
Nora also concluded that a sense of purpose and institutional allegiance affects college degree attainment (Nora, 2002). His studies confirmed that students' commitment to an institution had a positive effect on persistence to complete a college degree. Nora and Cabrera (1996) analyzed the student's commitment to an institution in Latinos and non-Latinos influence to reenroll in college. They found that Latinos are more likely to reenroll if they feel a strong allegiance to their university. Specifically, their study analyzed sophomore, junior, and senior minority students who were involved on extracurricular activities on their campus and they demonstrated stronger levels of persistence in overcoming barriers at their university than the minority students without a sense of allegiance.

Moreover, social experiences, cognitive, and noncognitive gains are important for Latino students to pursue a college education. These social experiences involve interaction with Latino students and faculty among the college population (Nora, 2002). Nora elaborates that these experiences drive students to have strong academic behaviors. Academic performance was a vital influential indicator for Latino students to reenroll after their first year in college. Course grades affected Latino students' decision to continue their college career after their first year three times more for non-Latino students (Nora & Cabrera, 1996). Academic achievement and corresponding perceptions of academic gain were the most prominent factors among Latinos to reenroll after

their first year of college. Therefore, it is crucial that students possess in-college rigorous behaviors that will allow them to persevere in order for them to continue pursuing their college career and ultimately obtain a bachelor's degree.

Nora addresses six different components that overlap in many areas: precollege factors include the valuing of education instilled by their family and how students develop aspirations from an early age. Furthermore, valuing of education also affects the Latinos' goal determination to pursue a bachelor's degree. Therefore, in this study, these factors were incorporated into my valuing of education factor. Persistence and cognitive and noncognitive outcomes both refer to in-college behaviors. These behaviors include reenrollment in higher education and actual academic gains. These factors are influenced by in-college rigorous behaviors. Figure 2.1 explicates how the components of Nora's Engagement Model relate to the Pew Hispanic Center constructs which ultimately derived to this study's three constructs.

Figure 2.1 Constructs Across Models



The figure presented explicates how Nora's Engagement Model's six constructs relate to the Pew Hispanic center constructs. Nora's constructs are pre-college factors, sense of purpose and institutional allegiance, academic and social experiences, cognitive and non-cognitive outcomes, goal determination, and persistence (Nora, 2006). Nora divides each construct into smaller factors. For example, pre-college factors include high school environment, financial assistance, encouragement and familial support, work responsibilities, and family responsibilities. Nora includes both high school environment and financial and work responsibilities under this construct. For this study, the pre-college factor of high school environment is related to college

readiness because K through 12 institutions that instill college knowledge have a positive influence on college enrollment (Watt, Huerta, & Alkan, 2011).

Nora's sense of purpose construct is related to the Pew Hispanic Center's and this current study's valuing of education construct. Nora elaborates how educational aspirations have a direct impact on academic and social experiences which ultimately affect college re-enrollment (Nora, 2002; 2006). The Pew Hispanic Center explicates how valuing of education is comprised of how the student and family views a four-year investment after high school (2009). Furthermore, the Pew Hispanic Center study's construct is related to the current research's construct of valuing of education. The Pew Hispanic Center questions participants about their goals after their high school graduation. Nora also includes goal determination as one of the main constructs (Nora, 2006). According to their data, Latino students preferred to work after high school instead of enrolling at a university (Pew Hispanic Center).

Nora's academic and social experiences and cognitive and non-cognitive constructs relate to the Pew Hispanic Center's quality of education and to this study's college readiness constructs. Nora states that students who have a positive relationship with other students and faculty will have a stronger sense of purpose and will demonstrate higher levels of persistence (Nora, 2006). The Pew Hispanic Center includes items under the construct that ask participants about their pre-college academic education. Participants were asked to answer if they believed they had a strong academic background and if they believe their grades are good enough for college (Pew Hispanic Center, 2009).

Nora's Engagement Model and the Pew Hispanic Center both include the construct of persistence (Nora, 2006; Pew Hispanic Center, 2009). Persistence is linked to this study's in-college rigorous behaviors construct. Nora elaborates how a student's persistence of overcoming perceived barriers is an influential factor for students to re-enroll at a university (2002; 2006). The Pew Hispanic Center study asks participants if they work harder than other students do, if

they research things they do not understand outside of class and other behaviors to measure persistence (2009).

College Matriculation and Completion Patterns for Latinos

According to the 2015 Census, there were 56.6 million Latinos residing in the United States (U.S. Census Bureau, 2015). However, a large percentage of Latinos, 34 percent, had still not completed high school. The inconsistencies continue to be prevalent even in post-high school education. Recent studies have documented that Latinos are enrolling and attaining college degrees today more than ever before (Perna, 2000). Latino undergraduate enrollment has increased 98 percent over the past decade (Perna). However, even though college matriculation has increased for Latinos, these students are enrolling yet they are not completing their college degrees (Arana, Castaneda-Sound, Blanchard & Aguilar, 2011; Ward, 2006). However, there are numerous discrepancies between Latino enrollments at four-year universities as compared to other ethnicities. For example, Latino students comprise the largest number of students in community colleges (Hurtado & Ponjuan, 2005).

Approximately, 55 percent of Latinos in college were enrolled in a two-year institution, which was the largest percentage across ethnic groups (Robinson, 2011). From the Latino students who were in the top 10 percent in their class, 15 percent of those students enrolled in a community college after high school. In contrast, 95 percent of the high-achieving Asian American students and 93 percent of the high achieving African American students enrolled at a four-year university (Hurtado & Carter, 1997). Even though these students demonstrated academic readiness, they still enrolled in a two-year institution. These students had the academic tools to succeed in a four-year institution; however, they still decided to enroll in a community college, most likely under-matching their capacity for college. Studies have demonstrated that Latino students who enroll in a four-year university after college are more likely to attain a bachelor's degree than those who enrolled in a two-year institution (Baker & Velez, 1996).

Between 1975 and 2010, the number of Latinos that earned a college degree increased from 9 percent to 13 percent (Aud & Kewal Ramani, 2011). To compare further, 33 percent of the U.S. population has a bachelor's degree and only 13 percent of Latinos have a bachelor's degree. This demonstrates an underrepresentation of Latinos with bachelor's degree since 17 percent of the population is Latino. The number of Latinos enrolling and completing bachelor's degree does not equate to the growth of the Latino population in the United States. The following section of this study focuses on factors influencing college completion: valuing of education, college readiness, and in-college rigorous behaviors.

Factors Influencing College Completion

Valuing of education. A fundamental characteristic for college success is Latinos' value in education. Value in education refers to a student's understanding of how valuable education is compared to not having education. A student demonstrates strong academic behaviors and academic achievement if his/her family values education (Escamilla & Guerrero, 2014). It is crucial for Latinos to see the value of the investment of four years at a university instead of joining the work force straight out of high school. According to Eccles and Wigfield (2002), attainment value refers to the importance of doing well on a task. To illustrate, a student that does well on college courses has higher attainment value. Furthermore, intrinsic value refers to the personal enjoyment of doing a task. A student who enjoys the process of obtaining a college degree demonstrates intrinsic value because he/she takes pleasure in the process. In addition, utility value is defined by the usefulness of the task to the individual's future goals. For example, if a student believes a college degree will allow him/her to reach his/her future goals; he/she is demonstrating utility value. The last task value is cost belief (Eccles & Wigfield). Cost belief denotes the perceived negative aspects of engaging in a task. For example, a student who believes four years in college is a waste of time is demonstrating a negative cost belief value of a college education (Wigfield & Eccles). Perna (2006) identified value as an important variable for college

choice. Perna postulated that college choice is based on how the student views the benefits and costs of attending college for four years.

A qualitative study by Irizarry (2012) studied different students and how value of education influenced their college careers. The study took place in two different high schools. One of the groups studied attended a public high school whose vision was to prepare students to succeed in college by instilling value of a college education beginning in their first year. The other high school did not incorporate the value of education into their daily curricula. The group of students in the high school who instilled the value of education had a higher utility value of a college degree than the group from the high school who did not incorporate the importance of college into their daily tasks. Both schools in the study were located in low socioeconomic and predominantly Latino areas. All of the students from the first school enrolled in four- year universities after high school. The students from the second high school, on the other hand, all graduated; yet, only 30 percent enrolled in two-year colleges. These students had no plans to transfer to a four-year university in the future according to the study. Many of them chose to enroll in the army, to study vocational careers, or to work in the family business (Irizarry). Therefore, it can be assumed that they valued a four-year college education more in the high school where students were taught the importance of a college degree.

Some studies have deduced that Latino families do in fact see the benefits of a college education. According to Rios-Aguilar and Kiyama (2012), families did believe education was important but did not know how to transition from high school to college. The families in this study expressed that it would be beneficial for them to know the statistics of the benefits of investing four years in a university education. They wanted to know how a college education increased quality of life. These families demonstrated valuing of education; however, they were unaware of the college matriculation process. Rios-Aguilar and Kiyama concluded that if parents understood that college was accessible and an investment that would benefit their children's life,

they would be less hesitant about a college education. Furthermore, they would have a positive cost belief value towards a college career.

Perna (2006) further supported this notion by explaining that if students were to examine the benefits and value of a college education, they would be more likely to invest more time on college choices and increase their value of education. Students decided if attending college was the right choice for them based on knowledge about college access. Students and families needed to be educated about college prices and financial aid to make an informed decision. Students and families can compare and see the benefits of investing four years in a college career (Nora, 2004).

Becerra (2010) concluded that by not having a college-going culture in their society, students were less likely to see the value of a college degree. Therefore, their levels of value towards a college education were lower. Young adults who attended at least some college or knew people attending college were more likely to see the benefits of an education (Becerra). The participants in Becerra's study who reported having friends and family members in occupations such as construction or auto repair perceived a college degree useless. In total, the literature suggests that it is important for families to value education in order to prepare for the expenses of this four-year investment. Students who have goals demonstrate higher levels of value towards education (Nora, 2002). The Nora Student Engagement Model (2006) focuses on how educational aspirations influence and increase Latino students' educational engagement. Students who have high aspirations and goals have demonstrated a higher level of commitment into their degree attainment (Nora, 2003; Nora, Barlow & Crisp, 2006).

Students who interact with a community that values education, teachers, and parents will encourage students to pursue a college career. Martinez (2012) interviewed six Latino seniors in Southwest Texas who had matriculated in college about their decision to continue their education. During these interviews, many students stated that family and teachers had encouraged them to

further their education in order to break stereotypes (Martinez). Hence, students already believed that the norm for the Latino population was not to have a college degree. Martinez perceived that the Latino population had lower expectations to have a college degree than the other ethnic groups.

In the United States, having a better quality of life can be goals and expectations in order to choose to have a college education. Goals refer to a strong desire to achieve an aspiration. Chapa and De la Rosa (2004) attempted to measure education goal levels among diverse ethnic groups, and they posited that Latinos had the lowest levels of aspirations by examining the census data trends. During this analysis, the researchers analyzed how Latinos' college degree attainment has not increased significantly in the past two decades. Studying the trends in the past decades can allow researchers to see the current trends of Latinos in higher education.

As concluded by Yosso (2005), in order for goals to become a reality, a person must have a strong aspirational capital. This capital refers to keeping aspirations even in the face of challenges and barriers. According to this explanation, many Latino students can face perceived barriers; however, it is the ones that believe in their aspirations and their will to overcome them that succeed through the college path. Strong aspirations can help students persevere to overcome barriers through their college path.

Even though most Latinos aspire to attain a college education because it is important to have a better life, their expectations to enroll and attain a college degree were low (Lopez, 2009). It is crucial for students to value education by having high expectations in order to succeed through the college path (Cabrera & La Nasa, 2001). However, many studies reported that school personnel, such as counselors, did not believe in their competency enough to invest in them (Chavez-Reyes, 2010). Another study further indicated that most Latino students had high aspirations for a college education. However, the students' academic goals were obstructed by institutions, family members, and school personnel (Denner, Cooper, Dunbar, & Lopez, 2005).

Financial support. Financial support is essential for students to matriculate and complete a bachelor's degree. Therefore, financial support needs to be discussed in more detail. According to Nora's studies, familial financial support is a vital factor that influences post-high school education for Latinos (Nora & Ramirez, 2006). Latinos have indicated that a reason why they do not matriculate or attend college is due to the lack of finances (Nora, 2003). In Nora's study, Latino students expressed that the cost of a college education can be very high. Therefore, the lack of financial stability impedes them from even considering a college education. The students indicated that their families could not support the financial requirements of a college education. Furthermore, these Latino students felt a need to work and contribute to the family income. In addition, the Latino families lacked the knowledge of the college process to support and help their child into matriculating to a higher education institution. The Latino families did not fully comprehend the benefits of investing four years for an education. Without that knowledge, students did not have the support and encouragement needed to value a higher education (Nora). Chen and DesJardins (2010) also noted the importance of funding by concluding that financial funding was a vital reason for students dropping out of college.

A study surveyed Latino parents in a low-income high school regarding their children's plans towards education. The majority of the Latino parents stated that they hoped for their children to continue their education after high school (Auerbach, 2011). However, most of them had not met or did not know the counselors in the school. The majority were unaware of financial aid. The conclusion of this study was that Latino-serving high schools needed to involve and engage the parents more in the services they provide to enhance knowledge of the college process in Latino families who have never experienced college (Auerbach, 2011). These students had low aspirational capital because they did not overcome the challenges they faced even if they tried seeking college enrollment.

Quality of education. A lack of college preparation and misinformation about the possibilities of attending higher education were major obstacles for Latinos. A study conducted by Swail, Cabrera, Lee, and Williams (2005) utilizing data from the National Educational Longitudinal Study (NELS), examined the high school academic preparation of Latinos and how it influenced college enrollment. Swail et al. (2005) found significant differences between Latinos and White high school preparation. According to their study, Latino students were less academically prepared for high school while attending the same high school as their White counterparts. In fact, the attrition rate for Latino students from eight grade to ninth grade is between 40 percent to 46 percent (Nora, 2002). Therefore, there are many students dropping out of high school, which decreases their college readiness to succeed at a university.

Previous research has demonstrated that Latino students struggle in college because of the discrepancies in their college readiness compared to White students (Geiser & Studley, 2001). According to the U.S. Census (2015), only 15.5 percent of the Latino population has obtained a college degree, which is lower than other ethnicities: Whites (32.8 percent), African-American (22.5 percent), and Asian (53.9 percent). Latino students are lagging behind their ethnic counterparts in enrolling and obtaining a college education. There is a significant gap between Latinos and other ethnicities in college matriculation rates, college retention rates, and college attainment rates (Hurtado, Saenz, Santos, & Cabrera, 2008).

These attainment rates can increase by ensuring that all students have the same academic opportunities regardless of ethnicity. State educational agencies have found that there was a disparate level of college readiness among high school students (ACT, 2007). Thus, state educational agencies attempted to define and measure what college readiness means. According to The Chronicle of Higher Education (2009), students must have taken advanced placement courses during high school in order to be prepared for the level of rigor at a university (ACT). Adding to this study, Cabrera, Prabhu, Deil-Amen, Terenezi, Lee, and Franklin (2006) found that

Latino students had a tendency to score lower on standardized tests, which were critical predictors of college readiness, signifying that students' content knowledge and possibly students' cognitive strategies were not strong. However, standardized tests scores were still inconclusive as significant predictors to college success (Arbona & Nora, 2007). In addition, Horn (2005) concluded that standardized tests handicapped minority students in the college selection process. Additionally, James (2014) also concluded that standardized tests often hinder minorities because educational institutions utilize the scores to determine student academic success. James suggests that standardized tests should not be regarded with such value because minorities' performance is not an accurate representation of the students' abilities.

More recently, through support programs or charter schools, researchers can measure the academic readiness of Latino students in different environments. Watt, Huerta, and Alkan (2011) studied Latino students enrolled in a high school considered a Hispanic Serving Institution that offered AVID (Advancement Via Individual Determination). Students were eligible to enroll in this free program if they were Latino or African American and first-generation college-goers. In this study, 96 percent of the participants were Latino and 94 percent were economically disadvantaged. The researchers collaborated with a public high school in which 48 percent of the students voluntarily enrolled in the AVID program. All participants matriculated at a higher education institution after they graduated from high school. Ninety-two percent of the participants successfully passed their first year of college (Watt et al.). This study demonstrated that given the proper guidance and academic readiness, minority students can succeed at universities.

Studies had demonstrated that minority students can succeed in universities with the proper guidance; however, that guidance should be given prior to students attending college. The discrepancies of the educational experiences in public schools in the United States left many Latino students unprepared to meet the challenges and dedication a university requires (Lopez, 2009). A college education requires a vast amount of reading. De lo Santos and Cuamea (2010)

conducted a study concluding that Latinos are behind in literacy as compared to non-Latinos. Their study suggested that 49 percent of Latino adults tested at the lowest level of literacy and 33 percent tested at the second lowest level of literacy. Only three percent of Latino adults tested at the highest level of literacy. These adults were born and educated in the United States (De lo Santos & Cuamea). This conclusion is in accordance with Conley's (2011) theory that students must have strong language skills to successfully complete a college career. The same study surveyed college professors from a Hispanic Serving Institution on how they perceived the academic readiness of the student population. Forty percent of the respondents reported that a large number of the students were significantly unprepared for college courses.

Another struggle Latinos face in the K through 12 institutions is that their language needs are not being met. Students who do not have English-speaking family members are often behind on English language competency. Language competency refers to Latino students' domination of the English language to succeed at a university. There are programs in place in the United States to provide support for English Language Learners (ELL) students. Several states offer bilingual and ESOL (English for Speakers of Other Language) programs to help immigrant students become proficient in the English language (Lopez, 2009). The ELL population has grown dramatically in Texas' primary and secondary education institutions. In Texas, ELL enrollment increased by 40 percent between the academic years of 2000-2001 and 2007-2008 (Texas Education Agency, 2014). In 2008, 17 percent of the elementary students in Texas were ELL. Language proficiency is a prevalent barrier among Latino students.

Understandably, many of the ELL students reported a lack of confidence on their language skills as an important barrier to continue education post high school. Recent Latino immigrants enrolled in college reported difficulties in their English language development and writing skills as an important barrier for their college success (Lopez, 2009). In addition, Chavez-Reyes (2010) interviewed a Latino family whose children attended urban public schools in a large

metropolitan area. They stated that the school personnel provided certain accommodations or remediation for the ELL students. While some of these families had lived in the United States for a long time, their first language remained Spanish. Many of the accommodations provided by the public schools were culturally inappropriate since the families were mostly acculturated, but English deficient (Chavez-Reyes). Hence, English language domination has been a prevalent variable in the literature that seems to affect education.

Furthermore, Luna and Tijerina-Revilla (2013) interviewed seventeen Latino immigrants on reasons why they dropped out of high school. Some of them reported that they aspired to have a college education but dropped out of high school because they could not understand the language. They also reported not having enough support towards their language deficiencies (Luna & Tijerina-Revilla). They specified that the teachers would ask the students to get help from other classmates who often did not understand Spanish, and they had trouble communicating. The GPA of ELL students is significantly lower than the rest of the English-speaking students (Becerra, 2010). Since GPA is a determinant component of a college career, this becomes a vital barrier for ELL students.

Even though Latino students reported being enrolled at underfunded and underprivileged high schools, it was imperative that they received college information (Gandara, 2005). This college information was usually presented to students through their college counselors. However, low-income schools tended to have fewer college counselors. Therefore, students' contextual knowledge about the college process was compromised and their access to college information became difficult (McDonough & Calderone, 2006). College readiness not only encompasses academic readiness, but also provides students and families with comprehensive information about the path to college and increases contextual knowledge. Hurtado et al. (2008) concluded that the Latino group is the least knowledgeable group about college choices. It is imperative that

students possess college knowledge in order to navigate the college process with confidence (Saenz, Hurtado, Barrera, Wolf, Yeung, 2007).

Persistence and rigorous behaviors. One of Nora's construct is persistence and he indicates that persistence strongly influences higher education re-enrollment (Nora, 2002). The Pew Hispanic Center also measures persistence and in-college rigorous behaviors in order to determine college success (Pew Hispanic Center, 2009). Persistence has been an influencing factor to motivation to continue in college even when faced with adversities (Escamilla & Guerrero-Trevino, 2014). Escamilla and Guerrero-Trevino studied migrant students who often had academic deficits when compared to the rest of the population. This particular migrant group was exposed to the importance of college education and they demonstrated perseverance through remediation classes in order to attain a bachelor's degree. Their success at higher education is not typical of Latino migrant groups in the United States. Additionally, students reported having many challenges when trying to navigate the college enrollment system. They expressed that it was particularly difficult because of the unfamiliarity of the process. However, they were adamant about enrolling and searched for help from many resources. They cited their teachers as being the supportive role models to navigate the college path (Martinez).

It is vital that students perceive themselves to be academic competent and confident in order for them to enroll and persist to complete a post- high school degree. It is critical for students to believe they are capable of succeeding in higher education. Having rigorous academic behaviors is important in order to be successful in a university setting. These behaviors demonstrate that a student is dedicated to completing the degree. Self-belief is a force that can drive these behaviors in academics (Bordes-Edgar, Arredondo, Robinson Kurpius & Rund, 2011). According to the works of Bordes-Edgar et al., self-belief is strongly correlated to grade point average and strong academic behaviors.

Researchers have analyzed diverse factors that predict college completion, perseverance, and grit. Perseverance and grit refer to students continuing their education even in the face of challenges. These are vital variables to predict college success because they signify that a student will continue his/her studies even if faced with challenges (Prospero, Russell, Vohra-Gupta, 2012). Perseverance can drive college students towards graduation. As discussed by Saunders and Serena (2004), students demonstrated lower rigorous academic behaviors if they had less social support and a lack of understanding of the university system.

A study by De los Santos and Cuamea (2010) surveyed the faculty and staff at a university in Puerto Rico and found that most of the respondents believed perseverance and grit were important traits for student retention. In addition, 32 percent of the respondents believed lack of in-college academic behaviors were problematic within the student body and needed improvement.

According to the work of Sosa (2012), persistence has been identified in previous research to improve tests score and students' standards toward a wholesome education. However, Sosa believed that students who were involved in school activities were more likely to be more rigorous in their academic studies. Her research is supported by previous research, which determined that students who demonstrated perseverance and grit would cope with challenges and stress better than those without it (Johnson, 2008; Masten, 2001). Participants during another study believed challenges were inevitable and a part of college life (Cavazos et al., 2010). These academic behaviors have also demonstrated to improve student class engagement (Cefai, 2004).

Studies also indicated that rigorous in-college behaviors are linked with high grade point averages (Gloria, Castellanos, Lopez, & Rosales, 2005). Moreover, grade point average was a significant factor among Latino students to complete a college (Cerna, Perez, & Saenz, 2009). Bordes-Edgar, Arredondo, Robinson Kurpius, and Rund (2011) conducted a four-and-a-half-year study that examined the particular characteristics of students who remained enrolled at

the university versus the students who dropped out. This longitudinal study concluded that support provided by the university, such as mentors, was a key factor to influence rigorous academic behaviors. They further found that it was important for the Latino students to have a Latino as a mentor.

In-college rigorous behaviors are important for college completion. Therefore, it is important to understand how Latinos engage in these behaviors. A study found that in-college rigorous academic behaviors are low particularly for Latinas (Gloria & Castellanos, 2012). The study interviewed college students at a four-year research institution. Results revealed that the group with the lowest levels of perseverance and grit was Latinas. Latinas' rigorous academic behaviors were lower because they felt pressured by their family to stay at home and not leave for college. The Latina students responded that they often felt pressure by their family to stay close to home. Many respondents described that they often felt guilt about being in college. They also stated that they were questioned about their loyalty towards their family and were told they had abandoned their family. These students were also the first ones to attend college from their families (Gloria & Castellanos).

Further research also analyzed in-college academic behaviors in first-generation, Latino students. A study that explored diverse perseverance traits in a four-year public university found that rigorous behaviors of first-generation Latino students were lower than White students. To illustrate, 34.5 percent first-generation Latino students were less likely to persevere in college than first-generation White students (Lohfink & Paulsen, 2005). Students reported that GPA, sense of belonging, satisfaction with academic growth, a balanced social life, campus climate, financial support, and work and school balance were contributing factors for their lack of rigorous academic behaviors. Furthermore, the same study reported that among these Latino students, each \$10,000 increase in family income was correlated with a two percent increase in the probability of having strong academic behaviors (Lohfink & Paulsen).

Latinos reported that they felt more comfortable in small, private universities as opposed to public universities due to greater support and rapport with their professors. However, another study demonstrated that students in public universities that supported Latino organizations also had high Latino graduation rates (Martinez, 2012; Greene, Lara, Lara, Posadas, Medina, Oesterreich, Ruiz, Valverde, Chavez & Garcia, 2012).

Nora supported these findings on his Student Engagement Model (2006). According to his studies, having rigorous academic behaviors is among the leading factors influencing college attainment. Students who engaged in rigorous, academic behaviors were more likely to stay in college. Therefore, it is crucial to instill these rigorous behaviors in order to increase Latinos' college completion. Studies have suggested that in order to instill rigorous academic behaviors in the student body, universities need to make an effort to improve student engagement (Martinez, 2012; Greene et al., 2012). Universities were able to improve persistence by integrating students into the college social and academic settings through socializing agents and interpersonal relationships with peers and faculty (Arana, Castaneda-Sound, Blanchard, & Aguilar, 2011). Social and cultural factors have also been found to be influential in promoting strong, rigorous academic behaviors (Toews & Yazedjian, 2007; Wintre & Bowers, 2007).

Conclusion. Even though there is extensive research on the benefits of a college education for the betterment of a quality of life, the literature is less robust when focusing on the Latino population. Therefore, this study focuses on the probable factors why Latinos are not enrolling in or completing a college degree at the same rate as other ethnicities. The factors determined for analysis on this study are valuing of education, college readiness, and in-college rigorous academic behaviors. This study attempts to do so by analyzing the responses from a national survey focusing on the education and quality of life of Latinos. This contributed to the extant literature in understanding Latinos' underrepresentation at college campuses.

CHAPTER 3: METHODOLOGY

In this quantitative study, the results of a factor analysis conducted on a national survey by the Pew Hispanic Center in 2009 using appropriate factors from Nora's Student Engagement Model and the research on Latino college completion to determine items for a logistic regression are utilized. This study attempts to answer the research questions: Do valuing of education, academic readiness, and certain in-college rigorous behaviors increase the likelihood of a bachelor's degree completion among the Latino population? The archival data provides the outcome variable for this study: attainment or in the path of completing a bachelor's degree or not. In this chapter, a discussion of the methodology, research design, and data analysis are provided. The chapter concludes with limitations as well as a summary.

Research Design

In order to measure the predictive variables value, college readiness, and in-college rigorous behaviors and how they influence the outcome variable, completion or in the path to complete a bachelor's degree, a logistic regression statistical analysis was used. In order to measure bachelor's degree attainment, an analysis of the participants' responses to see if they did or did not have a bachelor's degree at the time of the interview was conducted. The majority of the sample population was between 16 and 25; therefore, it was necessary to analyze more responses besides if the participants had already completed a bachelor's degree. A combination of several responses was needed in order to measure if Latinos already had or were planning to complete a bachelor's degree. Therefore, a combination of the responses to the items that asked participants if they were currently enrolled in a four-year university or if they were enrolled in a two-year university and planning to transfer to a four-year university were used. If the participant responded yes; then, the interviewer asked if they were planning to complete a bachelor's degree.

Another item asked participants if they were currently enrolled in a two-year college and if they were planning to transfer to a four-year university. If the participants responded that they

were planning to transfer to a four-year university, those results to complete the outcome variable were utilized. Also, a combination of the item where participants responded if they already had completed a bachelor's degree was also aggregated. The combination of the responses of these three items were used to create a new binary, outcome variable.

Participants

The survey used was conducted in 2009 by the Pew Hispanic Center. The participants answered questions about their educational goals, experiences in high school, and their opinions about their educational institutions. More specifically, the NSL searched to investigate the demographic makeup of the Latino population in the United States, fathom the unique educational experiences of Latinos, and evaluate their approaches to social and political issues. This survey was conducted from August 5th through September 16th, 2009, among a randomly selected, nationally representative sample of 2,012 Latinos aged 16 and older, with an oversample of 1,240 Latinos ages 16 to 25.

For the logistic regression, participants between the ages of 18 and 25 only were selected. This allowed to look at participants who were already thinking of their post-high school choices. Therefore, the participants included in the analysis were 909 cases. The survey was conducted via a phone questionnaire by a private, independent research company, Social Science Research Solutions (SSRS) and was offered in both English and Spanish. The SSRS personnel asked the participants to choose their preferred language to answer the survey. Participants chose to answer in English only (n=1,128), Spanish only (n=842), or a combination of both languages (n=42).

The margin error for the full sample was plus or minus 3.7 percent at the 95 percent confidence level. The margin of error for participants' ages 16 to 25 was plus or minus 4.55 percent, and the margin of error for respondent ages 26 and older² was plus or minus 4.76

² The study did not indicate an age cap.

percent. From the 2,010 participants, 1,002 were second generation immigrants and 1,008 first generation immigrants. There was an approximately an equal number of males and females.

There were more landline interviews (n=1,360) than cell phone interviews (n=652) in the entire study. The study employed samples from both landline and cell phone and both frames were stratified via the Optimal Sample Allocation technique. This technique was utilized to provide a highly accurate sampling frame, which reduced the cost per effective interview (Pew Hispanic Center, 2009). For this study, SSRS examined a list of all telephone exchanges in a target area (national and state) and listed them based on Latino household totals. Then, SSRS used a disparate stratified sample of Latino households. The main stratification variables are the estimates of Latino household prevalence and heritage in each area code as provided by the GENESYS System. The basic procedure was to rank all the area codes in the United States by the frequency of Latino households.

Landline samples. For the landline samples, the sample was compared with InfoUSA and other listed databases and then matched with known Latino last names. The matched numbers were then allocated to the surname stratum, and all the other samples being placed in other randomly-selected strata (Pew Hispanic Center, 2009).

The researchers also noted that the existence of a surname stratum did not mean that they solely used surnames to determine the participants. The randomly-selected sample was then divided by randomly-selected telephone numbers divided by likelihood of association with or without a Latino surname to in order to increase strata and thereby increase the capability to meet ethnic targets and alleviate administration. This process increased interviewers' efficiency by decreasing their labor hours.

Cell phone samples. Similarly, to landline sampling, the cell phone sample was stratified by anticipated Latino incidence and divided into three strata: low, medium, and high. These strata were based on the exchange's geographical location, identified through the three-digit area code

exchange. Because demographic information cannot be linked with cell phone numbers, this sample was not divided into listed components based on presumed age groups.

Age quotas. The Pew Hispanic Center research team was concerned in studying young Latinos. Particularly, SSRS applied quotas within each stratum to certify the overrepresentation of Latinos between the ages of 16 to 25. Moreover, in order to gather an ample number of responses from Latinos aged 16 and 17, the CATI (Computer Assisted Telephone Interviewing) program, was intended to disparately select this age group over all other age groups. If 16 and 17-year-olds were not present, 18 to 25-year-olds were more likely to be chosen than those 26 years or older.

The researchers wanted to include first-generation and second-generation immigrants to participate in the survey. The researchers acknowledged that this would mean the need to allow the participants to answer in their native language. Therefore, the questionnaire was translated into Spanish to allow respondents to answer the questionnaire in either language according to their comfort level. The translation process involved two native Spanish speakers, one from Mexico and one from Puerto Rico, who served as the translators. One of the interpreters translated the items separately and then compared the two versions. When there were disagreements about language usage, Pew Hispanic Center personnel decided which wording was more appropriate for the survey.

Response rate. The landline response rate was determined to be 31.4 percent; the cell phone rate was estimated to be 20.9 percent. The overall response rate for this study was calculated to be 26.6 percent. For further details on the interview process, see Appendix A.

Instrumentation. The instrument utilized for this study was originally attempting to measure four major constructs. These constructs were the importance of education, educational attainment and enrollment in school, explaining the Latino education achievement gap, and young

Latinos' evaluations of high school and colleges. This survey also asked many demographic questions to have a comprehensive view of the population surveyed.

These four major constructs had subconstructs that were being measured. For example, the importance of education had three subconstructs: value of a college education, Latino familial support of a college education, educational aspirations among Latino youth and all youths, and lower educational aspirations among immigrant youths. The second major construct educational attainment and enrollment in school had three subconstructs: educational attainment of Latino youth, young Latinos likelihood of school enrollment, and current Latinos' school enrollment. Additionally, the third major construct explaining the Latino education achievement gap was measured through the following subconstructs: Latinos' differences in school performance according to parents, Latinos' differences in school performance according to the students, and reasons for not continuing education. The last major construct young Latinos' evaluations of high schools and colleges was divided into two subconstructs: evaluating high school experiences and evaluating college experiences.

Factor analysis. Table 3.1 shows the items deduced from the factor analysis that were used to measure valuing of education among the Latino population. Afterwards, Table 3.2 demonstrates the items utilized to determine college readiness among the Latino population sample. Then, Table 3.3 shows the items used to measure in-college rigorous behaviors among the Latino sample.

The items attempting to measure Factor 1, in-college rigorous behaviors ($\alpha=.74$), had factor loadings higher than .59. Factor 2, academic readiness ($\alpha=.80$), had seven items loading with .57 and higher. The last construct, Factor 3, value of school ($\alpha=.84$) nine items with factor loadings higher than .61. Appendix 2 demonstrates the factor loadings of each survey item.

The factor analysis examined the factor loadings of the items utilized on this particular research. An exploratory factor analysis on the 52 items was conducted and seeing if they loaded

on the predicted constructs. The predicted constructs that had significant loadings are valuing of education, college readiness, and in-college rigorous behaviors.

Table 3. 4 summarizes how the constructs from the Pew Hispanic Center study fit into the constructs derived from the factor analysis conducted for this study. This table explicates how the constructs from the Pew Hispanic Center loaded to the factor analysis. Therefore, a demonstration of how each of the Pew Hispanic Center's constructs fit into my factor analysis is provided.

Table 3.1

<i>Items measuring valuing of education</i>	<i>($\alpha=.84$)</i>
<i>You don't need more education for the career you want.</i>	
<i>You can't afford to go to school.</i>	
<i>You don't like school.</i>	
<i>You need to help support your family.</i>	
<i>My parents play an active role in my education.</i>	
<i>Latino families don't play an active role in helping their children succeed helping their children succeed in school.</i>	
<i>You completed the degree or certificate you wanted.</i>	
<i>My parents believe it is important to continue my education after high school.</i>	
<i>In order to get ahead in life these days, it's necessary to get a college education.</i>	

Table 3.2

<i>Items measuring academic readiness.</i>	<i>($\alpha=.80$)</i>
<i>I am receiving a good education.</i>	
<i>My teachers are working to help me succeed.</i>	
<i>Latino students know less English than other students.</i>	
<i>Too many teachers don't know how to work with Latino students because they come from different cultures.</i>	
<i>Your grades or your college admission scores are not high enough.</i>	
<i>Your English skills are limited.</i>	
<i>You had academic problems.</i>	

Table 3.3

<i>Items measuring in-college academic behaviors.</i>	<i>($\alpha=.74$)</i>
<i>What is the last grade or class you completed in school?</i>	
<i>Latino students do not work as hard as others.</i>	
<i>I complete assignments until the last minute.</i>	
<i>I use a calendar of when assignments are due.</i>	
<i>I talk to my teachers about assignments outside of class.</i>	
<i>I research things outside of school if I don't understand them.</i>	

Table 3.4

<i>Pew Hispanic Center and Factor Analysis Constructs</i>
<i>Pew Hispanic Center Survey Constructs</i>
<i>Valuing of education</i>
<i>Financial support</i>
<i>Socioeconomic status</i>
<i>Parental education</i>
<i>Quality of education</i>
<i>Goals</i>
<i>Persistence</i>
<i>Factor Analysis Constructs</i>
<i>Valuing of education (financial support, parental education, goals)</i>
<i>College readiness (quality of education)</i>
<i>In-college rigorous behaviors (persistence)</i>

First, the factorability of all 52 items was analyzed. In the analysis, all 52 items correlated at least .4 with at least one other item, signifying sound factorability. In addition, the Keiser-Meyer-Olkin measure of sampling adequacy was .812, which is above the recommended .6. The determinant of the correlation matrix was .003 indicating that the factor analysis was adequate to utilize.

The desired constructs for this study are valuing of education, college readiness, and in-college rigorous behaviors. There are also demographic items on the survey. From the 52 items that were analyzed, only 22 loaded in the desired constructs. There were five items loading together representing in-college rigorous behaviors. Seven items loaded to the academic readiness construct. There were nine items loading in the valuing of school construct.

CHAPTER 4: RESULTS

Do Valuing Education, Academic Readiness, and Certain In-college Academic Behaviors Increase the Likelihood of Completion of a Bachelor's Degree Among the Latino Population?

A logistic regression analysis was conducted in order to predict whether bachelor degree attainment is influenced by the predictive variables of valuing education, college readiness, and certain in-college academic behaviors. Using the data set, an examination whether a test of the full model against a constant only model was statistically significant was conducted. This comparison indicated whether the predictors distinguished between Latinos who obtain a bachelor's degree and those who do not. The descriptive findings, model fit statistics, and logistic regression findings are presented below.

Descriptive findings. Of the 909 participants in the study, all preferred the interview to be in English. Also, 14.5 percent had at least 4 Latinos living in their household. The majority of the participants were from Mexican heritage, 61.8 percent. The majority of the participants did not indicate whether they were U.S. citizens, 58.2 percent. From the participants who did respond, 26.6 percent were not U.S. Citizens. Table 4.1 indicates demographic information in more detail about the participants included in the analysis.

Table 4.1

Demographic Information

	<i>N</i>	<i>Percentage</i>
<i>Preferred language</i>		
<i>English</i>	909	100
<i>Spanish</i>	0	0
<i>Other</i>	0	0
<i>Hispanics in household</i>		
1	79	8.7
2	70	7.7
3	92	10.1
4	132	14.5
5	94	10.3
6	53	5.8
7	24	2.6
8	16	1.8
<i>Family's heritage</i>		
<i>Mexican</i>	562	61.8
<i>Puerto Rican</i>	65	7.2
<i>Cuban</i>	41	4.5
<i>Dominican</i>	41	4.5
<i>Salvadoran</i>	37	4.1
<i>Other Central</i>		
<i>America</i>	27	3.0
<i>Other South</i>		
<i>America</i>	23	2.5
<i>Other</i>	103	11.3
<i>Don't know</i>	9	1
<i>Refused</i>	1	.1
<i>U.S. Citizen</i>		
<i>Yes</i>	135	14.9
<i>No</i>	242	26.6

Of the 909 Latino participants who were included in this study, 24 percent were enrolled or were planning to enroll at a university. The majority of the participants (90 percent) believed that education was important in order to get ahead in life. A large percentage (92 percent) of the participants responded that they were unsure if they could afford a college education. Furthermore, 92 percent of the participants were not sure their academic grades were good enough to be successful at a university. More than half of the participants (59 percent) reported

being unsure that their early education prepared them to succeed in a college environment. The majority of the participants, 88 percent, did not know what their parents expected them to do after high school. Table 6 provides a summary of the descriptive statistics for the analysis.

Table 4.2

<i>Means of Valuing of Education, Academic Readiness, and In-College Rigorous Behaviors</i>			
	<u><i>N</i></u>	<u><i>Mean</i></u>	<u><i>SD</i></u>
<i>Valuing of Education</i>	909	92.49	10.78
<i>Academic Readiness</i>	909	72.85	7.25
<i>In-College Rigorous Behaviors</i>	909	10.08	2.13

Model-fit statistics. In order to test a goodness of fit model, the Hosmer and Lemeshow test was conducted. This test is an alternative to the chi square model to ensure that the data is a good fit. This test divides subjects into ordered groups and compares the number in each observed group to the number predicted by the logistic regression model. The 10 ordered groups were created based on the estimated probability. The Hosmer and Lemeshow statistic has a significance of .61, which means it is not statistically significant. Therefore, the model is a good fit.

Logistic regression findings. A logistic regression analysis was conducted to predict bachelor's degree completion using valuing of education, college readiness, and in-college rigorous behaviors. A test of the full model against a constant only model was statistically significant indicating that the predictors as a set reliably distinguished between completing or planning to complete a bachelor's degree and not completing or planning to complete a bachelor's degree ($\chi^2 = 103.97, p < .001$ with $df=3$).

Nagelkerke's R^2 of .16 indicated a moderately weak relationship between prediction and grouping. Prediction success overall was 73.8 percent (10.1 percent for not completing or planning to complete a bachelor's degree and 93.8 percent for completing or planning to complete a bachelor's degree). The Wald criterion, 222.17, demonstrated that the outcome

variable was significant to the prediction. If we did not know much about the predictive variables and guessed that a person would complete a bachelor's degree, we would be 76.1 percent correct.

On this analysis, the logistic model explains 11 percent of the variation in the outcome variable. Table 4.3 demonstrates that according to the logistic regression, valuing of education and academic readiness are significant predictors of bachelor degree completion. The variable of in-college rigorous behaviors was not a significant predictor of bachelor degree completion.

Table 4.3

Logistic regression: parameter estimates and model evaluation

	<u><i>b</i></u>	<u><i>S.E.</i></u>	<u><i>Odds ratio</i></u>
<i>Valuing of Education</i>	<i>.13*</i>	<i>.01</i>	<i>1.13</i>
<i>Academic Readiness</i>	<i>-.16*</i>	<i>.02</i>	<i>.85</i>
<i>In-college Rigorous Behaviors</i>	<i>-.01</i>	<i>.04</i>	<i>.99</i>

Table 4.3 demonstrates that the odds of students completing a bachelor's degree are higher by 13 percent if they value education. In addition, the odds of students completing a bachelor's degree are 16 percent lower if the students are not academically ready.

CHAPTER 5: DISCUSSION, IMPLICATIONS FOR PRACTICE, AND CONCLUSION

Latinos' underrepresentation at universities is a topic that must be examined and discussed in depth in order to provide insight and understand this concern. The largest minority in the United States is the Latino population, yet they are the lowest ethnic group to attain bachelor degrees (U.S. Census Bureau, 2015). As a result, there is a gap between the number of Latinos in professional fields requiring bachelor's degrees and the Latino population. In an attempt to analyze this concern, archival data from the Pew Hispanic Center of Statistics that surveyed Latinos about their educational goals, achievements, and attitudes was used. Specifically, an

analysis was conducted of the factors valuing of education, college readiness, and in-college rigorous behaviors to determine which predicted bachelor degree attainment among that particular Latino population in order to instill in them the values and factors that will increase the likelihood of a bachelor's degree.

Discussion of Findings

Valuing of education. The extant analysis indicated that valuing education is a significant predictor of college completion or the path of completion. The higher the value Latino students place on education, the greater the probability of their completing a bachelor's degree. This finding supports Nora's Engagement Model, which states that Latino students who value education by having high expectations and goals are more likely to continue education after high school (Nora, 2006). The participants who agreed that they needed to continue their education to attain the career they wanted demonstrate that they have high aspirations.

Additionally, according to the studies of Perna, Latino students who see the benefit of investing money and time into a four-year university degree make the choice to attend college (Perna, 2006). The analysis for this study supports Perna's findings since participants' responses to school affordability and familial responsibilities were significant predictors of college completion. The logistic regression conducted for this research demonstrates that valuing education does predict bachelor's degree completion.

College readiness. Another significant predictor of bachelor degree attainment, according to the study, is academic readiness. It is evident by previous research that low-income school districts demonstrate low level of academic attainment (De Los Santos & Cuamea, 2010 and Lopez, 2009). In order to increase college readiness, the level of state academic standards must also increase. The more academically prepared a student feels, the higher the probability of he or she will complete a bachelor's degree. This finding further supports Nora's Engagement Model, which indicates that students who are confident with their academic knowledge are more

likely to persevere in their college career (Nora, 2006). According to Nora, Latinos have a higher attrition rate from eighth to ninth grade than non-Latinos. This higher number of attrition of students in middle school indicates that they will not complete high school; therefore, a bachelor's degree is difficult to obtain since students will have to obtain a GED in order to matriculate at a university.

In addition, Nora's studies theorize that Latinos also have high dropout rates in their first years of college (Nora, 2003). His studies indicate that students drop out of college because they do not feel prepared to continue their education. During my research, participants answered survey questions about whether they felt they had received a good education and whether they believed their grades were high enough for college admissions. The responses to these questions demonstrated that students' perceptions of their academic readiness are significant predictors to the attainment of a bachelor's degree. The logistic regression conducted for this analysis validates that academic readiness is a significant predictor of bachelor's degree completion. Therefore, the results of this analysis validate the studies that state that academic readiness is a vital influential factor for success at a university (De lo Santos & Cumea, 2010 and Lopez, 2009).

In-college rigorous behaviors. The analysis did not indicate that in-college rigorous behaviors was a significant predictor of bachelor's degree completion. The survey questioned students about their behaviors in school. The participants answered whether they procrastinated, kept a calendar, completed research outside of the classroom, and worked harder than everyone else in the class. The analysis indicated that these behaviors did not predict college completion. Even if students demonstrated rigorous behaviors such as organization, responsibility, discipline, and diligence, they still did not feel confident enough to continue their post high school education. Valuing education and academic readiness are stronger predictors of college success. Therefore, K through 12 education institutions need to focus on valuing education and academic readiness in order to prepare Latino students to be successful in college.

The literature indicates that persistence is an important trait that Latinos need in order to continue their college career even when faced with adversity (Nora, 2006). Even though it is crucial for educators to instill rigorous behaviors, these behaviors might not be sufficient to motivate students to seek further education. However, if Latinos value education, they will persist through barriers in their educational career. Therefore, valuing education is vital in order for students to enroll in and then persist at the university level.

Implications for Practice

Valuing of education. My study provides educators insight as to why there is an underrepresentation of Latinos at universities. According to my study, Latinos have lower valuing of education as compared to other ethnicities and they perceive themselves to be less academically prepared as other ethnicities. Because valuing education and college readiness are significant predictors of bachelor's degree attainment for Latino students, professionals in K to 12 education should be aware of these factors and incorporate plans to develop them within the curricula. Valuing education and college readiness can definitely be a part of the daily curriculum in a school setting.

Valuing of education is more complex than just informing each elementary and secondary student the importance of education. In order to increase placing value on education for Latino students, educators must incorporate the entire family and promote the value of education in order to progress in society. Schools can provide trainings for parents about the difference of income between high school and university graduates. Also, it is essential that families understand the processes and timelines of enrolling in and completing college, including the financial aid and scholarship opportunities that are available for every student (Nora, 2003; Nora, Barlow & Crisp, 2006). These conversations should not only occur in high school, but families must be educated early on in order for them to plan and make a college education a

possibility. Schools also need a strategic plan that provides information about university possibilities to parents and students from an early age.

College readiness. This study indicated that college readiness is an influential predictor of college completion. Therefore, it is important to focus on college readiness in K through 12 educational institutions. The findings of this study concur with Nora's study, which also concluded the Latinos' attrition rate is high during secondary school. Students who drop out of high school might not see the importance of completing high school because they have other immediate concerns, such as financial responsibilities or starting a family (2003). The high levels of attrition can also be tied to how they value education. When students do not value a high school education, students even have a lower value of a college education (Nora, 2006). Therefore, incorporating college awareness seminars into the daily curriculum can increase students' college interest and decrease attrition.

Furthermore, another significant factor according to existing literature is that students do not feel academically confident to apply for college. Students have reported that standardized tests have often made them feel academically inept. Studies have demonstrated that standardized tests often handicap minority students in the college selection process (Horn, 2005). Therefore, students' perception of their academic readiness is negatively influenced by their standardized tests' results.

In-college rigorous behaviors. Although the findings of this study did not identify in-college rigorous behaviors as a significant predictor of bachelor's degree attainment, a substantial body of previous literature suggests that K through 12 institutions should incorporate teaching students coping strategies in order to be able to overcome perceived barriers (Gloria, Castellanos, Lopez, & Rosales, 2005). In previous studies, persistence has been an influential factor for overcoming barriers students may encounter during college enrollment and completion (Sosa, 2012; Johnson, 2008; Masten, 2001). First-generation students may encounter barriers that they

have never faced; therefore, it is crucial for them to learn how to cope, stay organized, and manage time properly.

Limitations

One of the limitations of this study is that the Pew Hispanic Center survey analyzed for this study was not designed specifically to measure the constructs studied. Even though the factor analysis signified sound factorability on valuing of education, college readiness, and in-college rigorous behaviors, the results would improve from a survey specifically designed for this study. In addition, the research data used has a different configuration than Nora's Student Engagement Model.

Another limitation is the age of the population surveyed. The majority of the sample is between the ages of 16 and 25; therefore, there are only a few respondents who might already have a bachelor's degree. Therefore, a combination of the responses where participants answered if they were currently enrolled in a four-year university and if they plan to finish a bachelor's degree was needed. By having an older sample of Latinos, there could be more respondents with the possibility of already having a bachelor's degree.

Moreover, the in-college rigorous behavior construct should be analyzed more in order to create items that measure these behaviors (persistence, responsibility, discipline) more accurately. This construct was not significant on this analysis, but creating different items to see if those measure the behaviors more adequately could lead to different results.

Future Research

Researchers interested in the area of Latinos in higher education in the future should analyze the extant trends of Latinos in education. The Latino population in the United States is growing and the demographics within the Latino population are changing (Perna, 2000; Arana, Castaneda-Sound, Blanchard & Aguilar, 2011; Ward, 2006). There is an increase of Latinos immigrating to the United States in the oil industry. These immigrants are usually college-

educated. Therefore, future researchers should study how college enrollment and completion differs within the Latino populations who have college-educated role models.

In addition, researchers should focus on language proficiency and gender to see if there are any significant differences. A factor that will be interesting to study is parental education and how it correlates to college enrollment and completion. In addition, differences between Latino groups will be interesting to analyze. For example, researches can study the differences in college completions among students of Mexican, Salvadorian, Guatemalan, Honduran, Puerto Rican and other Latin American countries.

Another aspect that would be interesting to study is what is affecting the recent increase in college completion among the Latino population. In particular, which factors are contingent to this trend change among Latinos? Future researchers should attempt to analyze these factors and how they influenced an increase in Latinos in higher education institutions. Also, researchers should focus on the type of high schools these college-bound Latinos students are attending and if charter schools have a significant impact to the increase of Latinos' college completion.

Many of these factors, college-educated role-models, parental education, and differences between types of school can be related to privileged and underprivileged factors. Therefore, future research should focus on analyzing the differences in college completion in privileged and underprivileged families. Many current studies tend to group all Latinos into one category; consequently, studying diverse groups of Latinos can help identify the specific influential factors towards college completion.

Conclusion

It is essential for the Latino college attainment gap to decrease significantly in order to equate the Latino population in the United States to the Latino population who is college-educated. This gap not only affects the Latino population, but it affects many sectors in our society. Many high paying jobs will benefit from having a Latino's perspective. A Latino

perspective can create a broader view to the American population of the Latino culture and appeal to international businesses. Furthermore, in order for this underrepresentation of Latinos in higher education to decrease, there needs to be more Latinos as faculty in universities. This will increase Latinos students' perseverance to stay in college because Latino students will have positive Latino role models. Also, Latino faculty members will understand and assist Latino students better because they can identify with them. An increase of Latinos in white-collar jobs will create a college culture because white-collar jobs can become the norm among Latinos. It is important for students to grow up in a pro-college culture in order for them to fathom the value of a college degree (Evans, 2009). In order for students to have a pro-college culture present, the public school system should also be held accountable for creating such a culture.

This study provides a specific perspective of why Latinos are lagging behind non-Latinos on bachelor degree attainment than the current literature. Since this study concluded that valuing education and college readiness are significant predictive factors for bachelor degree attainment, educational institutions can focus on increasing awareness of the importance of a college degree in order to have a better quality of life.

Appendix A

Instrumentation and Original Data Collection

Instrumentation and Original Data Collection

The research staff from the Pew Hispanic Center developed the questionnaire in consultation with the SSRS project team. Most of the items utilized on the interviews were previously used by the Pew Hispanic Center from previous NSL waves while some of the items were created exclusively for this study.

Each item of the questionnaire was translated into Spanish in order to accommodate the participants who wanted to answer the answers in English only, Spanish only, or a combination of both languages. Two researchers, one of Mexican heritage and another of Puerto Rican heritage, were asked to translate the questionnaire into Spanish. Then, both versions were compared by several bilingual personnel. Some disagreements over language usage occurred between versions; however, the Pew personnel made an executive decision on which version was more suitable for the survey.

Before the field period, SSRS programmed the study into CfMC Computer Assisted Telephone Interviewing (CATI). SSRS checked the program comprehensively to ensure that the skip pattern was following the design of the questionnaire. All questionnaires were conducted using the CATI system. This system ensured that the items were asked in a logical progression and that complete nature of the interviews was recorded.

The interviewers were trained and received the materials both in English and Spanish. The materials were given to the interviewers prior the field period in conjunction with an annotated questionnaire containing the goals of the study together with the correct pronunciation of key terms, potential obstacles and how to overcome them in order to obtain a good answer, and anticipated problems with their possible solution strategies.

The interviewers were trained twice. The first training occurred before the pretest study and once right before the field period. The trainers supervised the interviewers and walked with

them through each item in the questionnaire. Furthermore, the interviewers were given strategies to capitalize on response time and guarantee precise data collection.

During August 6th and August 10th, 2009, two live pretests were conducted for training purposes. The research staff from the Pew Hispanic Center monitored the interviewers as they conducted the questionnaire. The Pew Hispanic Center researchers and the SSRS project managers monitored the live interviews for approximately two hours. The additional interviewing times were digitally recorded and placed on a secure site for review. The Pew Hispanic Center researchers observed the interviews going well during the second pretest. However, some of the items were reworded due to time constraints.

The Pew Hispanic Center researchers trained the interviewers on how to maximize response time. The interviewers were told to contact each non-responsive number multiple times, changing the time of day and the day of the week. In addition, interviewers explained the purpose of the study, emphasizing that the Pew Hispanic Center sponsored the research, which added credibility to the study. Also, participants were allowed to provide a better time to call back if they were unable to participate at the time provided. Furthermore, the interviewers assured the participants that they would be rewarded with a \$10 incentive for participation.

Part of the study's goal was to analyze the attitudes of young Latinos. Therefore, the researchers were interested in the responses of underage participants. In order to be able to interview participants who were sixteen or seventeen years of age, they were asked to provide parental permission. Whenever the participant was under eighteen years of age, the interviewers requested to speak with the teenager's parents or legal guardian. They directly asked for consent to be able to interview the underage participant. If the parents or legal guardians of the minor were not present, then, a call back time was scheduled. If a minor answered on a cell phone, he/she was asked to provide parental contact information before beginning the interview process. Seven of the 232 cases who were minors contacted stated they had no parent or legal guardian.

The landline sample was then divided into five strata (surname, very high, high, medium, and low): five strata denoted by the likelihood of Latino households (each divided into listed and unlisted samples). Listed samples refer to phone numbers that could be found on the available lists (Claritas, Experian), demonstrating that there were residents between 16 and 25 years of age in that household. The unlisted samples were not found on the available lists.

Appendix B

**Items measuring major constructs from the Pew Hispanic Center 2009 National Survey for
Latinos from the factor analysis conducted**

Items measuring major constructs from the Pew Hispanic Center 2009 National Survey for Latinos from the factor analysis conducted

<u>Functional</u>	<u>F₁</u>	<u>F₂</u>	<u>F₃</u>
<u>Items</u>	$\alpha=.74$	$\alpha=.81$	$\alpha=.84$
	<u>Rigorous</u>	<u>Academic</u>	<u>Valuing of</u>
	<u>behaviors</u>	<u>readiness</u>	<u>school</u>
Behaviors			
What is the last grade or class you completed in school?	.59		
Latino students do not work as hard as others.	.67		
I complete assignments until the last minute. .71			
I keep a calendar of when assignments are due.	.77		
I talk to teachers about school work outside of class.	.75		
I research things outside of school when I do not understand them.	.57		
I am receiving a good education.		.89	

My teachers are working to help me succeed.	.79	
Latino students know less English than other students.	.83	
Too many teachers don't know how to work with Latino students because they come from different cultures.	.57	
Your grades or your college admissions scores are not high enough.	.76	
Your English skills are limited.	.69	
You had academic problems.	.91	
You won't need more education for the career you want.	.78	
You can't afford to go to school.	.81	
You don't like school.	.89	
You need to help support your family.	.67	
My parents play an		

active role in my
education. .63

Latino families don't
play an active role in
helping their children
succeed in school. .61

You completed the
degree or certificate
you wanted. .73

My parents
think it's important to
continue my education
after high school. .88

In order to get
ahead in life these
days, it's necessary
to get a college education. .89

Appendix C

Descriptive Statistics of Items in Logistic Regression Analysis

Descriptive Statistics of Items in Logistic Regression Analysis

<u>Item</u>	<u>N</u>	<u>Statistic</u>	<u>SD</u>
Outcome Variable	909	.76	.43
You don't need more education for the career you want.	909	6.91	2.42
You can't afford to go to school.	909	6.88	2.44
You need to support your family.	909	6.82	2.59
You don't like school.	909	6.87	2.46
My parents play an active role in my education.	909	7.89	.86
Latino families don't play an active role in helping their children succeed in school.	909	1.97	1.51
You completed the degree or certificate you wanted.	909	7.42	1.83
Your parents believe it's important to go to college after high school.	909	2.22	2.28
In order to get ahead in life these days, it's necessary to get			
a college education.	909	1.13	.60
I am receiving a good education.	909	7.89	.88
My teachers are working to help me succeed.	909	7.88	.88
Latino students			

know less English than others.	909	1.97	1.40
Too many teachers don't know how to work with Latino students because they come from different cultures.	909	2.17	1.53
Your grades or your college admission scores are not high enough.	909	7.02	2.29
Your English skills are limited.	909	6.87	2.47
You had academic problems.	909	7.43	1.78
What is the last grade or class you completed in school?	909	3.64	1.53
Latino students do not work as hard as others.	909	2.35	1.50
I complete projects until the last minute.	909	1.94	.41
I keep a calendar of when assignments are due.	909	1.95	.47
I talk to teachers outside of class about classwork.	909	1.88	.45
I check my grades regularly.	909	1.79	.59
I research things I don't understand.	909	8	.00

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